

PHASE I BOOK EXPLOITATION SOV/4821

Siforov, Vladimir Ivanovich, Corresponding Member, Academy of Sciences USSR

Radioelektronika v issledovaniyakh kosmosa (Radio Electronics in Investigations of the Cosmos) Moscow, Izd-vo "Znaniye", 1960. 47 p. 32,000 copies printed.
(Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znanii. Seriya IX, Fizika i khimiya, 20)

Ed.: I. B. Faynboym; Tech. Ed.: L. Ye. Atroshchenko.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The booklet describes in popular form the use of complex radio-electronic devices in recent investigations of cosmic space. The latest achievements in Soviet radio electronics, especially those which helped to develop cosmic studies, are reviewed and the recent contributions of Soviet scientists in this field are stressed. No personalities are mentioned. There are no references.

Card 1/2

PHASE I BOOK EXPLOITATION SOV/5135

Nauchno-tehnicheskoye obshchestvo radiotekhniki i elektrosvyazi im.
A.S. Popova

100 let so dnya rozhdeniya A.S. Popova; yubileynaya sessiya (One Hundredth
Anniversary of the Birth of A.S. Popov; Anniversary Session) [Moscow]
Izd-vo AN SSSR, 1960. 312 p. Errata slip inserted. 2,800 copies printed.

Sponsoring Agency: Akademiya SSSR.

Chief Ed.: A.L. Mints, Academician; Editorial Board: G.D. Burdun, A.R. Vol'pert,
I. Ye. Goron, L. I. Gutensakher, I.I. Grodnev, N.D. Devyatkov, L.A. Zhekulin,
S.I. Katayev, M.S. Neyman, V.I. Siforov, and N.I. Chistyakov; Ed. of Publishing
House: L.V. Gessen; Tech. Ed.: S.G. Markovich.

PURPOSE: This collection of reports is intended for scientists and technicians
working in radio engineering and telecommunications.

COVERAGE: The reports included in this collection were submitted at the scientific
meeting held in 1959 by the Nauchno-tehnicheskoye obshchestvo radiotekhniki i
elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio

Card 1/7

One Hundredth Anniversary (Cont.)

SOV/5135

Engineering and Telecommunication imeni A.S. Popov) in commemoration of the 100th anniversary of A.S. Popov's birth. Only 89 of the more than 300 reports submitted at the meeting are included. The remainder are published in the periodicals of the AS USSR, State Committees, the Ministry of Communications, and the Society imeni A.S. Popov. The book contains the reports read at plenary sessions by A.M. Shchukin, Academician, A.A. Pistol'kors, Corresponding Member, AS USSR, and E.I. Adirovich and L.I. Gutemakher, Professors, as well as those selected as the most interesting given in the following sections by their respective chairmen: Theory of Information, Antenna Systems, Receiving Devices, Wire Communications, Television, Electronics, Radio Measurements, General Radio Engineering, Transmitting Devices, Radio Wave Propagation, Electron Microscopy, Radio Broadcasting, Electroacoustics and Sound Recording, Electronic Computer Engineering, and SHF Ferrite Devices. These chairmen were on the Editorial Board which prepared the papers for publication. References accompany most of the reports.

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One Hundredth Anniversary (Cont.)

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AVAILABLE: Library of Congress

Card 7/7

JP/drk/gsp
5-24-61

FLASH 1 BOOK EXPOSITION

Sov/946

Mishayev, A. A., ed.

Бюллетень космоса: космическая станция (Space Stations) [Collection of Articles] Moscow, Izd-vo AM SSSR, 1960. 148 p. 25,000 copies printed. (series: Akademija nauk SSSR. Buchno-populyarnaja serija.)

Ред. РД: A. A. Mishayev; Compiler: V. V. Fedorov; Ed. of Publishing House: Ye. M. Kryau; Tech. Ed.: I. D. Savchenko.

Purpose: This book is intended both for the space specialist and the average reader interested in space problems.

Content: The book contains 73 short articles by various Soviet authors on problems connected with space travel and the launching of artificial earth satellites and space rockets. Some possibilities of future developments are also discussed. The articles were published in the period of 1957-1960. No references are mentioned. There are no references.

M. MECHANISM OF SPACE SCIENCE

Likhachev, A. A. Corresponding Member of the Academy of Sciences USSR. Soviet Space Rocket Approaches the Perihelion [October 18, 1959]

360

Салютные полеты. Кандидаты в Кандидаты в педагогических науках. Научный кружок кандидатов педагогических наук. [October 8, 1959]

364

Союз-1. Кандидат в Кандидат в космической фотографии. [October 28, 1959]

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Полеты к Луне. Кандидат в Кандидат в физике и математике. [October 28, 1959]

351

Компьютер. Кандидат в Кандидат в автоматической вычислительной технике. [October 28, 1959]

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Макробиотика. Кандидат в Кандидат в биологии. [October 28, 1959]

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Макромакроэнергетика. Кандидат в Кандидат в энергетике. [October 28, 1959]

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Greetings From the Central Committee of the CPSU and the Council of Ministers of the USSR [Pravda, August 23, 1960]

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Смирнов, Николай Евгеньевич

Microw vs radio receiver. 2d, surv. ed. Wright-Patterson Air Force Base,
Technical Information Center, 1970
iv, 716 p. illus., diagrs., graphs, tables. (F-TS-9838/V)
Translated from the original Russian: Radiorivniki sverkhvysokikh chastot.
2d ed. Moscow, 1957.
Bibliography: p. 685-711.

SIFOROV, V. I.

"Studies on Code Theory in the USSR."

report presented at the 13th General Assembly of URSI - Commission VI,
5-15 Sep 1960, London, UK

SILFCROV, V. I., PRGSIN, A. V. TSIBAKOV, B. S.

"Investigation of the Properties of Radio Communications Channels
Containing Statistically Inhomogeneous Media,"

Report presented at the 13th General Assembly of URSI - Commission VI,
5-15 Sep 1960, London UK

SIFOROV, V.; BERG, A.I., akademik; MINTS, A.L., akademik; KUGUSHEV, A.M.,
doktor tekhn.nauk, prof.

Supporting the appeal of chemists. NTO 2 no.5:38 My :60.
(MIRA 14:5)

1. Chlen-korrespondent Akademii nauk SSSR, predsedatel' TSentral'nogo
pravleniya nauchno-tekhnicheskogo obshchestva radiotekhniki i elektro-
svyazi im. A.S. Popova (for Siforov). 2. Chleny TSentral'nogo pravleniya
nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im.
A.S. Popova (for Berg, Mints). 3. Predsedatel' Moskovskogo oblastnogo
pravleniya nauchno-tekhnicheskogo obshchestva radiotekhniki i
elektrosvyazi im. A.S. Popova (for Kugushev).

(Technical societies) (Radio research)

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S/026/60/000/02/002/052
D031/D002

3.2100

9(0)

AUTHOR:

Siforov, V.I., Corresponding Member
Radio-Electronics in the Cosmos

TITLE:

PERIODICAL:

Priroda, 1960, Nr 2, pp 5-7 (USSR)

ABSTRACT:

The author outlines the difficulties which confronted Soviet specialists in designing the radio apparatuses installed on the automatic interplanetary station which photographed the back side of the moon, and the radio electronic devices on earth. He further tells of the difficulties of the transmitter on board the investigating part of the radio huge cosmic distances and the interplanetary station. These may be judged from the fact that their capacity was by 100 million times below the capacity of radio signals were

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Radio-Electronics in the Cosmos

received by the antenna of a usual TV set, i.e. only a few watts. Highly sensitive radio receivers and high quality antennas as well as the use of transmitting velocities which were tens of thousands times slower than the transmission speed in usual TV ground centers helped to overcome these difficulties. A longer operation of the apparatuses was ensured by solar batteries, converting the sun's energy into electric power. Greater economy was exercised in using electric energy. Information was transmitted according to a certain program 2 to 4 hours per day. The station's apparatuses were controlled from earth, thus making it possible to switch them on only when necessary. The author emphasizes the greater accuracy of the initial motion data as compared with that for the launching of the second

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Radio-Electronics in the Cosmos

Soviet cosmic rocket. Speaking of the role played by radio-electronics in investigating the cosmic space by means of satellites and rockets, the author states that the chemical and solar power supplies ensured a continuous and stable operation of the "Mayak" radio transmitter emitting radio waves on 25,005 megacycles. Additional information on the ionosphere and the radio wave propagation was obtained by observation of the radio signal transmission. The preliminary calculation of a great number of variants of the rocket's trajectories, the calculation of admissible inaccuracies in the values of the initial velocities, the directions of the movement, the moments when the container separated, etc. - all this was carried out by means of electronic mathematical machines. The radio from satellites and rockets transmitted numerous scientific information on the most diverse

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Radio-Electronics in the Cosmos

properties of cosmic space. It was by means of radio-electronic devices that the correctness of the chosen trajectories was checked during the initial stages of the flight. It was for the first time in the history of radio engineering and electronics that the automatic control of apparatuses on board the third cosmic rocket was carried out over a distance of about 500,000 km. With the help of an automatic system of orientation,¹ the station's rotation around its center of gravity was discontinued. The rotation began when the station's last stage separated and the station occupied a certain position toward the moon favorable for photographing its reverse side. This complicated technical task was accomplished with the help of a set of devices including solar and lunar pickups converting the energy of the sun's direct rays and those reflected

Card 4/5

SIFOROV, V.I.

Lenin and radio, Izv.AN SSSR.Otd.tekhn.nauk.Energ.i avton.
no.2:10-12 Mr-Ap '60. (MIRA 13:4)
(Radio)

AUTHOR: Siforov, V. I., Corresponding Member 8/030/60/000/02/023/040
AS USSR B008/B008

TITLE: Colloquium on Microwave Telecommunication Lines

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, Nr 2, pp 101-102 (USSR)

ABSTRACT: This is a short report on the Colloquium on Microwave Telecommunication Lines held in Budapest (Hungary) from November 10 to 13, 1959. It was convened by the Department of Technical Sciences of the Hungarian Academy of Sciences jointly with the Scientific-technical Association for the Telecommunication System of Hungary. It was the aim of the Colloquium to discuss various scientific-technical problems in the field of microwaves and especially radio relay communications in the centimeter wave range. Scientists and engineers from Austria, England, Hungary, Eastern Germany, the USSR, the U.S.A., France and Czechoslovakia attended the Colloquium. In the lectures of Soviet scientists on the theory of communication channels with parameters variable at random (V. I. Siforov) and on long-distance communication by ultrashort-waves (A. V. Prosin), the basic results of the papers in this field were explained, which were ascertained at the Institut radiotekhniki i elektroniki Akademii nauk SSSR (Institute of Radiotechnics and Electronics of the Academy of Sciences USSR).
Card 1/2 ✓

SIFOROV, V.I., doktor tekhn.nauk, prof.; GUTKIN, L.S., doktor tekhn.nauk, prof.; LEBED'V, V.L., kand.tekhn.nauk, dotsent

Development of radio engineering in the Soviet Union. Trudy
MEI no.33:2,3-266 '60. (MIRA 15:3)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Radio)

SIFOROV, V.I.; NAYMAN, M.S.

All-Union scientific session dedicated to Radio Day.
Radiotekhnika 15 no.7:76-79 J1 '60. (MIRA 13:7)
(Electronics—Congresses)

KATSENELENBAUM, Boris Zakharovich; SIFOROV, V.I., ovt. red.; SEMIDT, V.V.,
red. izd-va; RYLINA, Yu.V., tekhn. red.

[Theory of nonuniform wave guides with slowly varying parameters]
Teoriia nereguliarnykh volnovodov s medlenno meniaushchimsia
parametrami. Moskve, Izd-vo Akad. nauk SSSR, 1961. 215 p.
(MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Wave guides)

GUTKIN, L.S.; LEBEDEV, V.L.; SIFOROV, V.I.; ARENBERG, N.Ya., red.; SVESHNIKOV, A.A., tekhn. red.

[Radio receiving systems] Radiopriemnye ustroistva. By L.S.Gutkin, V.L. Lebedev, V.I.Siforov. Moskva, Izd-vo "Sovetskoe radio." Pt.1. 1961. 702 p. (MIRA 14:12)

(Radio-- Receivers and reception)

SIFOROV, V.

Electronics in outer space. Starsh.-serzh. no.7:29 Jl '61.
(MIR 14:9)

1. Predsedatel' Nauchno-tehnicheskogo otdel'stva radiotekhniki
i elektrosvyazi imeni A.S. Popova, chlen-korrespondent Akademii nauk
SSSR.

(Space flight) (Electronics)

SIFOROV, V.

An important direction. Radio no.1044-5 0 '61. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR.
(Electronics)

SIFOROV, V.I.

Draft project on terminology in the theory of reliability in the
field of radio electronics. Radiotekhnika 16 no.7:77 Jl '61.
(MIRA 14:7)

1. Predsedatel' Tsentral'nogo pravleniya Nauchno-tehnicheskogo
obshchestva radiotekhniki i elektrosvyazi imeni A.S. Popova, chlen-
korrespondent AN SSSR.
(Radio-Terminology) (Electronics-Terminology)

SIFOROV, V.I.; PROSIN, A.V.

Accumulation of noises and fading in single-band radio relay
lines. Radiotekhnika 16 no.8:3-5 Ag '61. (MIRA 14:7)

1. Deyativitel'nyye chleny Nauchno-tehnicheskogo obshchestva
radiotekhniki i elektrosvyazi.
(Radio relay systems—Noise)

SIFOROV, V.I.

Problems and development of radio electronics. Radiotekhnika
16 no.9:5-9 S '61. (MIRA 14:9)

1. Predsedatel' TSentral'nogo pravleniya Nauchno-tehnicheskogo
obshchestva radiotekhniki i elektroniki im. A.S. Popova.
(Radio)

SIFOROV, V.I.

Problems of electronics and the course of its development. Vest.
AN SSSR 31 no.9:17-24 S '61. (MIRA 14:10)

1. Chlen-korrespondent AN SSSR.
(Electronics)

SIFOROV, V.I., otv. red.

[Theory of reliability in radio electronics; general concepts, failures, redundancy, parameters, and tests] Teoriia nadezhnosti v oblasti radioelektroniki: Obschchie poniatiiia. Otkazy. Rezervirovanie. Parametry. Ispytaniia; terminologiiia. Moskva, Izd-vo Akad. nauk SSSR, 1962. 46 p. (Its: Sborniki rekomen-

(MIRi 15:9)

1. Akademiya nauk SSSR. Komitet tekhnicheskoy terminologii.
2. Chlen-korrespondent Akademii nauk SSSR (for Siforov).
(Radio-Terminology) (radio-Quality control)
(Electronic apparatus and appliances-Quality control)

SIFOROV, V.

Cosmic television. Starsh.-serzh. no.5:24-25 Ky '62. (MIRA 15:6)

1. Chlen-korrespondent AN SSSR.
(Astronautics--Communications systems)
(Television)

S/26/62/000/007/004/005
D050/D113

AUTHOR: Siforov, V.I., Corresponding Member, and Linkovskiy, G.B.
TITLE: Reliability in the living nature
PERIODICAL: Priroda, no. 7, 1962, 27-30

TEXT: The functional reliability of living organisms is studied, in order to find a basis for developing electronic simulators. In this connection, the works of Academician A.N. Kolmogorov are mentioned. The reliability of functional elements of living organisms is discussed and illustrated, and the probability of a breakdown or of accident-free functioning of an organism is expressed statistically in proportion to the number of elements. The reliability of living organisms is based mainly on the fact that the functions of elements failing to operate are either taken over by reserve cells or compensated through more intense work by the remaining cells. Only recently, the study of the load reserve problem in engineering was started by G.V. Druzhinin ("Radiotekhnika i elektronika", vol. 6, no. 5, 1961). There are also other reasons for the functional reliability of living organisms, such

Card 1/2

SIFOROV, V.I.

The 22d Congress of the CPSU and problems of radio electronics.
Radiotekhnika i elektron. 7 no.1:3-6 Ja '62. (MIRA 15:1)
(Communist Party of the Soviet Union) (Electronics)

33780
S/108/62/017/001/007/007
D271/D304

13,2960
9.2400 (1139, 1159, 1161)

AUTHORS: Siforov, V.I., and Linkovskiy, G.B., Members of the Society (see Association)

TITLE: Statistical evaluation of the reliability of "ageing" devices

PERIODICAL: Radiotekhnika, v. 17, no. 1, 1962, 62 - 67

TEXT: The authors aim at developing a method for evaluating, on a statistical basis, the danger of failure of a device, whose chances of failure grow with time; failures due to ageing and primary faults are taken into account. The danger of failure at a moment t is $a(t)$ which is equal to the ratio of the number of devices failing in a unit time to the total number of devices operating at t ; the reliability $P(t)$ is the probability of the device not failing in the time t . When ξ is the random value of the operational life of the device

$$P\{\xi > t\} = P(t).$$

(1)

The probability of $\xi \leq t$

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Statistical evaluation of the ...

$$Q(t) = P\{\xi < t\} = 1 - P\{\xi > t\} = 1 - P(t). \quad (2)$$

The danger of failure and the reliability are related by the expression

$$P(t) = \exp\left[-\int_0^t a(t)dt\right] \quad (3)$$

$$Q(t) = 1 - \exp\left[-\int_0^t a(t)dt\right]. \quad (4)$$

and hence

When $a(t) = \text{const.}$, reliability follows exponential law. Observations show that $a(t)$ is a continuous function of t , and the probability density of ξ is

$$p_\xi(t) := \frac{dQ(t)}{dt} = a(t)\exp\left[-\int_0^t a(t)dt\right], \quad t \geq 0. \quad (5)$$

The precise form of $a(t)$ is not yet determined by observation; the

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Statistical evaluation of the ...

problem of reliability belongs to non-parametric statistics, but it can be reduced to parametric statistics: $a(t)$ can be approximated by a polynomial of a sufficiently high order m

$$a(t) = \sum_{k=0}^m \lambda_k t^k, \quad (6)$$

where λ_k are parameters of the distribution (5). The problem is thus reduced to a well known problem of optimal evaluation of a finite multitude of parameters λ_k ($k = 1, 2, \dots, m$). Primary values of t_1, t_2, \dots, t_n are found by observing ξ on a number of identical devices, $n = 30 - 50$. m is usually chosen between 12 and 18. Parameters λ_k^* are found from a system of equations of the form

$$\left[\prod_{l=1}^n \left(\sum_{k=0}^m \lambda_k t_l^k \right) \right] \cdot \sum_{l=1}^n \frac{t_l^{k+1}}{k+1} = \sum_{l=1}^n \left\{ t_l^k \cdot \prod_{\substack{j \neq l \\ k < j < n}} \sum_{k=0}^m \lambda_k t_l^j \right\}, \quad (k = 0, 1, 2, \dots, m). \quad (11)$$

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Statistical evaluation of the ...

This system can be solved for λ_k only approximately, but with any required degree of accuracy, and then an empirical function is established for $a^*(t)$

$$a^*(t) = \sum_{k=0}^m \lambda_k^* t^k. \quad (19) +$$

The confidence interval for the true danger of failure $a(t)$ is found from the formula

$$\begin{aligned} P &= P[(a^*(t) - u\sqrt{Da^*(t)}) < a(t) < a^*(t) + u\sqrt{Da^*(t)}] = \\ &= \frac{1}{\sqrt{2\pi}} \int_u^{\infty} e^{-\frac{w^2}{2}} dw. \end{aligned} \quad (22)$$

where the right-hand side is a tabulated normalized Laplace function, $Da^*(t)$ is the dispersion. The expression for the empirical reliability $P^*(t)$ of the device is

$$P^*(t) = \exp \left[- \int_0^t a^*(w) dw \right] \quad (23)$$

Card 4/5

SORIN. Ya.; BRUYEVICH, N.G., akademik; Gnedenko, B.V., akad.; SIFOROV,
V.I.; SOTSKOV, B.S.

Precise, strong and lasting. Znan.-sila 37 no.5:10-16 My '62.
(MIRA 15:9)

1. Predsedatel' komiteta Vsesoyuznogo soveta nauchno-tehnicheskikh
obshchestv po nadezhnosti i kontrolyu kachestva (for Sorin).
2. Akademiya nauk Ukrainskoy SSR (for Gnedenko). 3. Chleny
korrespondent AN SSSR (for Siforov, Sotskov).
(Quality control)

SIFOROW, Włodzimierz

Soviet radioe~~in~~ Przegl techn no.45:2 11 N '62.

1. Członek korespondent Akademii Nauk ZSRR.

SIFOROV, V.I.; LINKOVSKIY, G.B.

Reliability in the living nature. Priroda 51 no.7:27-30 J1 '62.
(MIRA 15:9)

1. Institut radiotekhniki i elektroniki AN SSSR, Moskva.
2. Chlen-korrespondent AN SSSR (for Siforov).
(Cybernetics)

FLEYSHMAN, Bentsion Semenovich; SIFOROV, V.I., otv. red.; ZHEVSKIY,
V.F., red.izd.-va; POLYAKOVA, T.V., tekhn. red.

[Constructional methods of optimum coding for noisy channels]
Konstruktivnye metody optimal'nogo kodirovaniia dlia kanalov
s shumami. Maskva, Izd-vo AN SSSR, 1963. 224 p.
(MIRA 16:8)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Information theory) (Telecommunication)

GUTKIN, L.S.; LEBEDEV, V.I.; SIFOROV, V.I. Prinimali uchastiye:
VASIL'YEV, D.V.; SVISTOV, N.K.; LYUBIMOVA, T.M., red.;
BELYAYEVA, V.V., tekhn. red.

[Radio receiving devices] Radiopriemnye ustroistva. Pod
red. V.I.Siforova. Moskva, Sovetskoe radio. Pt.2. 1963.
(MIRA 17:2)
399 p.

SIFOROV, V.I. (Moskva)

Maximum amount of information from a receding source. Izv.
AN SSSR. Tekn. kib. no. 4:80-83 Jl-Ag '63.
(MIRA 16:11)

SIFOROV, V.I.; TSYBAKOV, B.S.

Development of the information theory in the U.S.S.R. Part
1. General survey of papers. Izv. AN SSSR. Tekh. kib. no.5:
(MIRA 16:12)
74-78 S-0 '63.

SIFOROV, V.I.

A conference devoted to the "Radio Day." Vest. AN SSSR ³³ (MIRA 16:8)
no.7:119 J1 '63.

1. Chlen-korrespondent AN SSSR.
(Radio--Congresses)

SIFOROV, Vladimir I.

"Some problems of decoding device theory."

paper presented at Intl Conf. Microwaves Circuit Theory & Information Theory, Tokyo,
7-11 Sep 64.

Inst of Radioengineering & Electronics, AS USSR.

SIFOROV, V.

The great future of radio electronics. Tekh. i vooruzh. no.1:18-20
Ja '64. (MIRA 17:6)

1. Chlen-korrespondent AN SSSR.

KELDYSH, M.V., akademik; SIFOROV, V.I.; VERNOV, S.N.

Explorers of the Universe. Kryl.rod. 15 no. 4:6-7 Ap '64.
(MIRA 17:5)

1. President Akadem.i nauk SSSR. (for Keldych). 2. Chleny-kor-
respondenty AN SSSR (for Siforov, Vernov).

SIFOROV, V.I.

"Problems affecting the development of radio engineering and
electronics." Vestn. AN SSSR 34 no. 2:70-73 F '64. (MIRA 17:5)

1. Chlen-korrespondent AN SSSR.

SIFOROV, V.I., etv. red.

[Reliability of engineering systems and articles; basic concepts: terminology] Nadezhnost' tekhnicheskikh sistem i izdelii; osnovnye poniatija: terminologija. Moskva, Nauka, 1965. 37 p. (Sbornik rekomenduyemykh terminov, no.67a) (MIRA 18:7)

1. Akademiya nauk SSSR. Komitet nauchno-tekhnicheskoy terminologii. 2. Chlen-korrespondent A. SSSR.

SIFOROV, V.I.; NOVIK, I.B., kand. filosofskikh nauk; SIUTSKIY, M.S.,
kand. filosofskikh nauk

Lenin's ideas and modern natural science. Vest. AN SSSR 35 no.4:
5-10 Ap '65. (MIRA 18:6)

1. Chlen-korrespondent AN SSSR (for Siforov).

L 1945-66 EWT(d)/FSS-2/EWT(1)/FS(v)-3/EEC(k)-2/EWA(d) AST/IT/RB/GS/GI/MS-2
ACCESSION NR: AT5018644 UR/0000/65/000/000/0011/0023

AUTHOR: Siforov, V. I. (Corresponding member AN SSSR)

56
341

TITLE: Role of radio in cosmic explorations

SOURCE: Radio 70 let (Seventy years of radio); nauchno-tehnicheskiy sbornik.
Moscow, Izd-vo Svyaz', 1965, 11-23

TOPIC TAGS: aerospace communication

ABSTRACT: A brief review of Soviet Cosmic explorations and the role of electronic and communication equipment in them is offered. The history of Soviet cosmic explorations is subdivided into five periods. The first "pre-Sputnik" period is characterized by ionospheric, galactic r-f, lunar r-f, and solar r-f investigations. The second period — from 4 Oct 57 to 12 Apr 61 — covers the unmanned satellite investigations. Considerable results re characteristics of the ionosphere and lunar space (including photographing the

Card 1/2

SIFOROV, V.I.

Paths of electronics. Priroda 54 no.6:35-40 Je '65. (MIPA 18:6)

1. Chlen-korrespondent Akad SSSR.

L 09091-67 EWT(d)/FSS-2/IWT(1)/EWP(1) TT/GW

ACC NR: A17002332

SOURCE CODE: UR/0026/66/000/006/0002/0003

AUTHOR: Siforov, V. I. (Corresponding Member AN SSSR)

52
51

ORG: none

TITLE: Soviet science in the new five-year plan

14

SOURCE: Priroda, No. 6, 1966, 2-3

TOPIC TAGS: communication satellite, navigation system / Molniya-1 communication satellite

VV

ABSTRACT:

The directives of the Twenty-Third Congress of the Communist Party USSR on the Five-Year Plan for Development of the National Economy for 1966-1970 provides for the further study of space and the use of the results for improvement of radio communication, radio navigation and television, meteorology, etc. The Soviet communications satellite Molniya-1 has laid the beginning of a system of distant communications and other important applications of artificial earth satellites for solution of many terrestrial problems. Equipping satellites with superior electronic apparatus will lead to improved sea and air navigation. A vessel at any point in the ocean will be able to interrogate a satellite and obtain precise data on the position and velocity of motion of the satellite at this particular time. Using data

Card 1/2

0925 0613

L 09091-67

ACC NR: AP7002332

on satellite motion and its orbital parameters the navigator will be able to precisely compute the positions of the vessel in the ocean. Satellites will greatly improve the field of meteorology. In the near future such satellites will create a global observation system. Study of processes occurring on the sun will result in improved forecasts of the propagation of radio waves in the earth's atmosphere, since the state of the latter is essentially dependent on solar activity. For improvement of radio communication via artificial satellites, in addition to active systems, such as

Molniya 1,¹ there may be systems of passive and semipassive types. In these latter systems it is effective to use antennas which have the capability of reflecting radio waves in the direction from which they are received. Also of great promise are the methods of quantum electronics, especially lasers and semiconductor instruments. (JPRS: 37,397)

SUB CODE: 22,17 / SUBM DATE: none

Card: 2/2 net

ACC NR: AN7003743

SOURCE CODE: UR/9036/67/000/005/0013/0013

AUTHOR: Siforov, V. (Director; Corresponding member AN SSSR)

ORG: none

TITLE: Unified, all-state automatic [information transmission system]

SOURCE: Literaturnaya gazeta, no. 5, 1 Feb 67, p. 13, col. 4-7

TOPIC TAGS: communication system, communication coding, coding

ABSTRACT:

In an interview, V. Siforov, Director of the Institute of Information Transmission Problems of the USSR Academy of Sciences, said that the Institute's scientists are working on the theoretical principles of a single, overall state automatic communications system (YeASS). He said that a single coded language must be adopted for all of the various information transmitting media of the system. Work toward increasing and improving the existing systems is being carried on, and work on the unified system is set for the 1966-1970 five-year plan.

SUB CODE: 09/
17/ SUBM DATE: ncne/ ATD PRESS: 5113

Card 1/1

UDC: none

ACC NR: AP6034475

SOURCE CODE: UR/0433/66/000/010/0028/0028

AUTHOR: Semenova, S.; Siforova, T.

ORG: VNIIKhSZR

TITLE: Fitios, a new acaricide

SOURCE: Zashchita rasteniy, no. 10, 1966, 28

TOPIC TAGS: pest control, acaricide, ^{ANIMAL} parasite, PHOSPHATE, CARBAMIDE

ABSTRACT: Fitios 0,0-dinethyl S-(N-ethylcarbamidomethyl) dithiophosphate was used successfully against rodent parasites, especially ticks. When used in commercial concentrations, percent kills varied between 90—100%. This compound is persistent, retaining its properties up to two weeks. In the laboratory, concentrations fatal to single ticks varied between 0.00015 to 0.001% solutions. {W.A. 50}

SUB CODE: 06 / SUBM DATE: none

Card 1/1

UDC: 632.951.1

L 41730-66	EWT(m)/EWT(l)/EMP(t)/ETI	IJP(c)	JD/JG/RM
ACC NR:	AP6020367	(A)	SOURCE CODE: UR/0078/66/011/003/0475/0477
AUTHOR:	Ivanov-Emin, B. N.; Siforova, Ye. N.; Fisher, Marianna Mekes; Kampas, Virkhiniya Mal'yado		
ORG:	Peoples' Friendship University im. Patrice Lumumba (Universitet druzhby narodov)		
TITLE:	Study of the solubility of hydroxides of certain lanthanides in sodium hydroxide solutions		
SOURCE:	Zhurnal neorganicheskoy khimii, v. 11, no. 3, 1966, 475-477		
TOPIC TAGS:	hydroxide, solubility, sodium hydroxide, lanthanum compound, ytterbium compound, gadolinium compound		
ABSTRACT: The solubility isotherm of lanthanum, gadolinium, and ytterbium hydroxides in sodium hydroxide solutions of various concentrations was studied at 25°C. The solubility of lanthanum hydroxide does not increase with rising NaOH concentration. The solubility isotherm of gadolinium hydroxide rises only slightly with NaOH concentration; the solubility curve has no maximum. In the case of ytterbium hydroxide, the solubility isotherm has a distinct maximum at an NaOH concentration of approximately 14.1 N; the solubility at this maximum amounts to 4 g of hydroxide per liter of solution, i.e., 2×10^{-2} mole/l. The solid phase up to the maximum is $\text{Yb}(\text{OH})_3$, and at higher NaOH concentrations the solid phase is sodium hydroxyytterbate.			
Card 1/2	UDC: 546.65-36		

SIFRER, M.

The valleys of Tolminka and Zalasca during the Pleistocene. p. 253.

GEOGRAFSKI ZBORNIK. ACTA GEOGRAPHICA. Ljubljana. Vol. 3, 1955

So. East European Accessions List Vol. 5, No. 9 September, 1956

SIFRER, Milan

Snowfields in the Savinja Alps. Geogr zbor SAZU 6:271-286 '61.

SIFER, Milan, dr.

"The beginning and development of a valley" by Sieghard Morawetz
Reviewed by Milan Sifrer. Geogr vest 33:190-191 '61.

1. Clan Uredniskega odbora, "Geografski vestnik".

SUBJECT	USSR / PHYSICS	CARD 1 / 2	PA - 1636
AUTHOR	SIFRIN, F.S.		
TITLE	A Method for Studying the Electron Terms of Diatomic Molecules. The Electron Terms and the Lengths of the Molecules of Alkali Metals and of their Hydrides.		
PERIODICAL	Dokl. Akad. Nauk, 110, fasc. 4, 549-551 (1956) Issued: 12 / 1956		

It applies in approximation that $T_k l = C_k = \text{const}$. Here T_k denotes the optic electron terms and l - the length of the molecule. A method for the study of T_k of diatomic (and possibly also of triatomic) molecules is suggested, namely the reciprocal tuning of the totality of the electron terms of the homologous molecules with the help of the mentioned rule. This method is explained on the basis of an example. The values of T_1 of the various molecules are actually grouped around the two numbers 45 000 and 60 000. The same ordinal number is ascribed to the terms with similar T_1 , namely in the case of $T_1 \sim 45\ 000 T = T_1$ and of $T_1 = 60\ 000 T = 2$. Also the symbols belonging to T_1 and T_2 are given. For the term 14.663 of Rb_2 one obtains T_2 and besides this term is odd. For T_1 , it apparently applies that $T_1 l \sim 45\ 000$. Herefrom follows for Rb_2 with $l = 4.23$ the value $T_1 \sim 10\ 600$. The method is simple and effective, it permits the systematization of the electron terms and the discovery of hitherto unknown terms. If, in future, a new term is found for

SIFROSHVILI, N.A., starshiy nauchnyy sotrudnik; MINASYAN, L.G.

Readers' letters. Zashch. rast. ot vred. i bcl. 9 no.2:
17 '64. (MIRA 17:6)

1. Gruzinskiy institut sadovodstva, vinogradarstva i vino-deliya, Tbilisi (for Sifroshvili). 2. Armyanskaya karantinnaya laboratoriya (for Minasyan).

YUGOSLAVIA/Chemical Technology. Chemical Products. Corrosion. H-4
Corrosion. Protection.

Abs Jour : Rof Zhur - Khimiya, 1956, No 22, 74354

Author : Siftar J.

Inst : Not Given

Title : Corrosion of Sewer Pipes of the City of Zagreb.

Orig Pub : Zast. mater., 1956, 6, No 1, 35-37

Abstract : Possible reasons for corrosion of the concrete sewer pipes, incapacitated after 3 years of service (from the time of installation), are reviewed in detail. On the basis of this investigation it was concluded that a combination of a number of factors, of which corrosivity of the industrial effluents as the primary one, were responsible to this corrosion. In order to prevent repetition of similar incidents it was recommended that a survey of corrosivities be conducted in every specific instant, before new concrete sewer lines are constructed.

Cord : 1/1

SIFTAR, Dubravko, ing.chem.(Zagreb); JURKOVIC, Ivan, dr.ing.(Zagreb)

Witherite of Homer in Gorski Kotar, Croatia. Geol vjes Hrv 14:
89-95 '60 (publ. '61).

1. Institute of Mining Chemistry, Technological Faculty, University of Zagreb, Zagreb, Kaciceva 26 (for Siftar). 2. Institute of Mineralogy, Petrology and Ore Deposits, Technological Faculty, University of Zagreb, Zagreb, Kaciceva 26. Clan Urednickog odbora, referent, "Geoski vjesnik" (for Jurkovic)

BRCIC, B.S.; BRENCIC, J.; SIFTAR, J;

Synthesis of calcium metatitanate at low temperature. Pt. 2.
Croat chem acta 3; no.2:135-139 '63.

1. Laboratorij za anorgansko kemijo, Institut za kemijo,
Univerza v Ljubljuni.

SIFTAR, Jaroslav, inz.

Mining results for the first half of 1963. Uhli 5 no.8:257-
258 Ag '63.

1. Ministerstvo průmyslu.

ZOLOTAREV, N.D., kand.tehn.nauk; SIGACHEV, A.Ye., inzh.

Peculiarities o' mining and the design of open pit elements
in cases of rock transfer to external dump piles. Izv.vys.
ucheb.zav.; gor.shur. no.7:15-26 '59. (MIRA 13:4)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo
Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana
kafedroy razrabotki rudnykh mestorozhdeniy.
(Strip mining)

FADEYEV, A.B.; STGAHNE, L.V.

Inclined boreholes as a means of leveling the bench floors in
granite quarries. Zap. IGT 47 no.3:97-94 '64.

(MIRA 18:8)

MUSTEL', P.I.; DYAD'KIN, Yu.D.; BOKIY, B.V.; KELL', L.N.; KOMAROV, V.B.;
SEMEVSKIY, V.N.; BORISOV, D.F.; GOLOVIN, G.M.; USEVICH, I.V.;
DUBRAVA, T.S., SHABLYGIN, A.I.; ZOLTOLAREV, N.D.; GALAYEV, N.Z.;
SIGACHEV, A.Ye.; PANENKOV, Yu.I.; SENUK, D.P.; KOPYLOVA, Ye.V.

Pavel Ivanovich Gorodetskii; an obituary. Gor zhur. no.5:77 My '60.
(MIRA 14:3)
(Gorodetskii, Pavel Ivanovich, 1902-1950)

L 10491-65 EWT(1)/EWA(h) Pst GG/KLK
ACCESSION NR: AT4047629

S/0000/64/000/000/0339/0376

5

AUTHOR: Solov'yeva, S. F.; Sigachev, I. I.; Surkova, N. A.; Kogteva, Ye. V.

TITLE: Relay-and-microswitch-type contacts for small-signal switching ²⁵

SOURCE: Vsesoyuznoye soveshchaniye po elektricheskim kontaktam i kontaktnym materialam. 3d, Moscow, 1962. Elektricheskiye kontakty* (Electric contacts); trudy* soveshchaniya. Moscow, Izd-vo Energiya, 1964, 339-376

TOPIC TAGS: small signal switching, small signal contact, microswitch contact, relay contact

ABSTRACT: An investigation of the effect of films on contact surfaces is presented. Two designs of contacts were studied: (1) Air-exposed contacts and (2) Sealed-in-plastic-container contacts. The "effect of long storage" was studied by subjecting the contacts to a 10-15-mlit/min flow of H₂S, concentration 3 mg/liter, at 25±3°C, 95±3% humidity, for 48 hrs; Ag, Au, Pt, Pd, and

Card 1/3

L 10491-65
ACCESSION NR: AT4047629

their alloys with Ni, Zr, Rh, were tested as contact materials. "Methods of investigating the electrophysical characteristics of surface films formed on contact materials" included measuring the resistance, by voltmeter and ammeter, of a contact between the plate specimen and a sphere made from Pt+25% Ir alloy; the test plate was placed in a PMT-3 microhardness tester whose diamond indentor was replaced with the above sphere; a contact pressure of 0.5-200 g was applied; open-circuit voltage was 50 mv; current, 10^{-6} - 10^{-1} amp. "Contact resistance" was determined as a function of (a) pressure and (b) current; results in the form of curves and tables are reported. It was found that: (1) Only those alloys based on Au and Pt are fit for operation in a modern industrial-center atmosphere that contains H₂S; (2) The best of them proved to be Au+16% Pd; (3) Also, Au+5% Ni and Au+3% Zr deserve the attention of further studies; (4) Of the Pt alloys, Pt+10% Rh can be recommended; however, its contact resistance was found to be nearly 4 times as high as that of Au+16% Pd after the test; (5) Ag and its alloys are unfit for use in exposed-contact designs. The "effect of organic volatile substances on contacts in sealed designs" was

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L 10491-65
ACCESSION NR: AT404762

studied by placing both the plastic and contact material in a sealed envelope and subjecting it to thermal aging. Plastics AG-4S at 175C, K-211-3 and RST at 150C, and teflon at 250C were aged for 178 hrs. Dark spots were discovered on the metal after the aging test; the spots were due to the metal surface sorption of the volatile substances produced by the plastic materials. The spots on some of the metals and alloys offered a contact resistance up to tens of megohms. Silver and Au+ 3% Zr, combined with any of the above plastics, showed a contact resistance of about a few tenths of an ohm; these metals are recommended for sealed-contact designs. Org. art. has: 41 figures, 4 formulas, and 3 tables.

ASSOCIATION: none

SUBMITTED: 13Jul64

SUB CODE: EC, DP

Card 3/3

NO REF SOV: 005

ENCL: 00

OTHER: 002

Составлено: А.И.

BLINOV, Igor' Aleksandrovich, dots., kand. tekhn. nauk; ZHERLAKOV,
Aleksandr Vasil'yevich, dots., kand. tekhn. nauk; IKONNIKOV,
Dmitriy Nikolayevich, dots.; SMIRNOV, Yevgeniy Leonidovich,
dots., kand. tekhn. nauk; YANUSENKOVA, Andrey Andreyevich,
starshiy nauchnyy sotr., kand. tekhn.nauk; SIGACHEV, N.I.,
dots., kand. tekhn. nauk, retsentent; RODIONOV, A.I., dots.,
kand. tekhn. nauk, retsentent; ZOTEYEV, Ye.S., kand. fiz.-
mat. nauk, retsentent; SERKO, G.S., red.; TIKHONOVA, Ye.A.,
tekhn. red.

[Electric navigation instruments] Elektronavigatsionnye pri-
bory. [By] I.A.Blinov i dr. Moskva, Izd-vo "Morskoi tra-
sport," 1960. 674 p. (MIRA 15:3)
(Electricity on ships) (Aids to navigation)

SHULEYKIN, V.V., akademik; SIGACHEV, N.I.

New test of the hypothesis concerning the nature of magnetic declination. Dokl. AN SSSR 140 no.1:107-110 S-0 '61. (MIRA 14:9)

1. Nauchno-issledovatel'skoye sudno "Mikhail Lomonosov".
(Magnetic anomalies)

L 42063-65 EEO-2/EWT(d)/FSS-2/EEC Pg-4/Pg-4/Pk-4/P1-4 BC	k)-2/EMG(v)/EED-2/EWA(c) Pn-4/Po-4/Pe-5/ UR/0286/65/000/007/0109/0109
ACCESSION NR: AP5010923	Sigachev, N. I.; Kogan, V. M.; Feodosiadi, 53 B
AUTHORS: Blagoveshchenskiy, M. N. F. A.	
TITLE: A gyroscopic device. Class 42, No. 169807	
SOURCE: Byulleten' izobreteniy i obozreniy o svernykh znakov, no. 7, 1965, 109	
TOPIC TAGS: gyroscope system, photosensitivity, kinetic method	
ABSTRACT: This Author Certificate presents a gyroscopic device containing a hollow rotor filled with a liquid, a universal suspension joint, an optical tracking system (consisting of a light source, a condenser, an objective, and a photosensitive cell), amplifiers, and instantaneous gauges (see Fig. 1 on the Enclosure). To increase the kinetic moment while using heavy liquids and to simplify obtaining a signal, the spherical hollow in the rotor is partly filled with a heavy liquid. The axis of the optical system producing a conical light beam impinging upon the photosensitive cell coincides with the rotation axis of the rotor. Orig. art. has: 1 figure.	
ASSOCIATION: none Card 1/1	submit date: 25 Apr 64

SIGACHEV, P.F.

Introduction of time-work-bonus system of wages at the Orotukan
Plant. Kolyma 21 no.2:4-6 P '59. (MIRA 12:7)

1. Filial Normativno-issledovatel'skoy stantsii.
(Orotukan--Machinery industry)
(Wages)

2/6/47 1
SIGARIN, V.S., doctor

a tubercularia of the lungs. Sov.nauk. 21 n.s.v.8-90 Je '57. (SLB. 137)

... radiology renigeneraci + radiolog. jek'torukogo meditsinskogo
instituta imeni S.M. Kirova
(LUDOS--TUMQIS)

SIGACHEV, V.F., dotsent (Gor'kiy, ul. M.Gor'kogo, d.149-a, kv.33)

Differential diagnosis of Besnier-Boeck-Schaumann disease. Vest.
rent. i rad. 36 no.3:36-41 My-Je '61. (MIRA 24:7)

1. Iz kafedry rentgenologii i radiologii (zav. - dotsent V.F.Sigachev)
Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova (dir. - dotsent
N.N.Misinov).

(GRANULOMA BENIGNUM)

SIGACHEV, V.F., dotsent (Gor'kiy)

Pneumosclerosis or chronic pneumonia? Klin. med. 41 no.4:
145-146 Ap '63. (MIRA 17:2)

1. Iz kafedry rentgenologii i radiologii (zav. - dotsent
V.F. Sigachev) Gor'kovskogo gosudarstvennogo meditsinskogo
instituta imeni S.M. Kirova (rektor - dotsent I.F. Matyushin).

GAVRILENKO, N.I.; SIGACHEV, V.K.

Experimental gasoline vending pump in a service station. Transp.
k khran. nefti no.1:23-26 '63. (MIRA 16:9)

1. Novosibirskoye upravleniye Glavnogo upravleniya po transportu
i snabzheniyu neft'yu i nefteproduktami NSFSR.

L h73u-6, ENT(u)/ENT(1)/EMP(v)/EMP(k); ENT(u), EMP(1) WH
ACC-NR: AP6029071 SOURCE CODE: UR/0413/66/000/014/0128/0129

INVENTOR: Gerlovin, L. I.; Chernovin, N. A.; Averin, V. A.; Nagibin, A. Ya;
Torgashov, A. B.; Aleksandrovskiy, A. A.; Sigachev, V. P.; Mikhaylovskiy, M. M.; 56
Mironov, M. I. B

ORG: none

TITLE: Valve with a hydraulic or pneumatic piston drive. Class 47, No. 184084
[announced by the Special Design Office of the Baltic Boiler Building Factory in
Sergo Ordzhonikidze (Spetsial'noye konstruktorskoye byuro kotlostroyeniya Baltiyskogo
zavoda)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 128-129

TOPIC TAGS: valve, hydraulic piston drive, pneumatic piston drive, hydraulic device,
pneumatic device, piston engine [1]

ABSTRACT: The proposed valve with a hydraulic or pneumatic piston drive is designed
for opening and closing the through flow-section of main and auxiliary pipings. In
order to synchronize the opening and closing of both pipings, its control piston is
provided with an annular groove, which, in the open valve position, connects the

UDC: 621.646.23-82-85

Card 1/2

L 4574-66

ACC NR: AP6029071

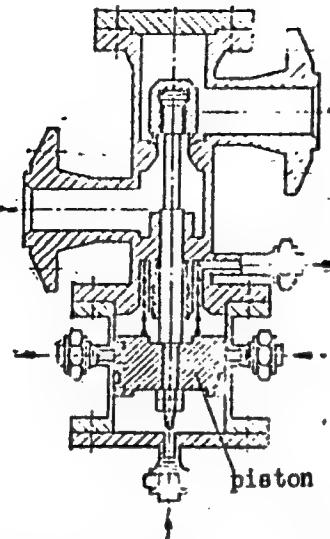


Fig. 1. Piston valve

intake and outlet cavities of the auxiliary piping (see Fig. 1). Orig. art. has:
1 figure.

[AV]

SUB CODE: 214 / SUBM DATE: 11May65 /

Card 2/2 mjs

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001550520014-8

SIGAL, A.B., inzh.; SAVOSTYUK, A.S., inzh.; IL'IN, G.I., inzh.

Condensate treatment. Energetik 12 no.11:17-20 N '64
(MIRA 18:2)

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001550520014-8"

EXCERPTA MEDICA Sec. 6 Vol. 11/5 May 57

3472. SIGAL A. E. * Histidine therapy of patients with chronic hyperacid gastritis (Russian text) KLIN.MED. (Mosk.) 1955, 33/2 (78-81)

The experience in histidine therapy in 40 female and 54 male patients was collected. The symptoms of the disease are described. Every case showed improvement after histidine therapy, in particular the pain was alleviated. X-ray examination revealed regression of the inflammatory phenomena. Simultaneously, 53 patients with gastroduodenal ulcers were observed and treated with the same drug. In these patients, the pain was also mitigated after 10 to 12 injections; heartburn and vomiting disappeared. On the whole, histidine had a particularly favourable effect on the pain and other findings, and the subjective condition was improved, the excessive secretion of gastric juice was diminished, and the working inability was earlier terminated than with other therapies.

SIGAL, A.E.

[Signature]
✓ Assay of carbonic anhydrase activity in blood in chronic pulmonary diseases. A. E. Sigal (Consolidated City

Hospital, Tashkent). *Terap. Arkb.* 28, No. 5, 60-8(1950). — The assay of blood carbonic anhydrase levels is suggested as a means of differential diagnosis between tuberculosis and nonspecific pulmonary abscesses. Forty nine cases of nonspecific pulmonary abscesses and 21 tuberculosis cases were studied. It was found that the carbonic anhydrase was decreased in all cases of pulmonary abscesses, the decrease running more or less parallel to the severity of the disease. No decrease was found in any of the 21 tuberculosis cases while 15 showed a decided increase. The colorimetric method of Kreps (*C.A.* 39, 534¹) was used for assay of the carbonic anhydrase. A. S. Mirkin.

SIGAL, A.E.; TOLKACHEVA, T.V.

Rate of radioiodine concentration as an indicator of absorptive
properties of the gastrointestinal tract. Probl. endok. i gorm.
7 no.1:79-82 '61. (MIRA 14:1)
(THYROID GLAND) (IODINE-ISOTOPES)
(ALIMENTARY TRACT)

SIGNAL, A.I., inzh.

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